



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

09/910,009

Source:

8/1/2001

Date Processed by STIC:

O/PK

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW:**

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/910,009

DATE: 08/01/2001
TIME: 15:38:10

Input Set : A:\2314-242.ST25.txt
Output Set: N:\CRF3\08012001\I910009.raw

*see
PP. 5, 2-4*

Does Not Comply
Corrected Diskette Needed

OK

3 <110> APPLICANT: University of Utah Research Foundation
4 Cognetix, Inc.
5 Olivera, Baldomero M.
6 McIntosh, J. Michael
7 Garrett, James E.
8 Watkins, Maren
9 Cruz, Lourdes J.
10 Shon, Ki-Joon
11 Jacobsen, Richard
12 Jones, Robert M.
13 Cartier, G. Edward
14 Shen, Greg S.
15 Wagstaff, John D.
17 <120> TITLE OF INVENTION: Mu-Conopeptides
19 <130> FILE REFERENCE: 2314-242
21 <140> CURRENT APPLICATION NUMBER: US/09/910,009
21 <141> CURRENT FILING DATE: 2001-07-23
21 <150> PRIOR APPLICATION NUMBER: US 60/219,619
22 <151> PRIOR FILING DATE: 2000-07-21
24 <150> PRIOR APPLICATION NUMBER: US 60/245,157
25 <151> PRIOR FILING DATE: 2000-11-03
27 <150> PRIOR APPLICATION NUMBER: US 60/264,319
28 <151> PRIOR FILING DATE: 2001-01-29
30 <150> PRIOR APPLICATION NUMBER: US 60/277,270
31 <151> PRIOR FILING DATE: 2001-03-21
33 <160> NUMBER OF SEQ ID NOS: 520
35 <170> SOFTWARE: PatentIn version 3.0
37 <210> SEQ ID NO: 1
38 <211> LENGTH: 280
39 <212> TYPE: DNA
40 <213> ORGANISM: Conus arentus
42 <400> SEQUENCE: 1
43 caagaaggat cgatagcagt tcatgatgtc taaactggga gtcttcttga ccatctgtat 60
45 gcttctgttt ccccttactg ctcttccgct ggatggggat caacctgcag accgacctgc 120
47 agagcgtatg caggacgaact ttataactga gcatcatccc ctgtttgatc ctgtcaaacg 180
49 gtgttgcgag aggccatgca acataggatg cgtaccttgt tgtaaatgac cagctttgtc 240
51 atcgcggcct catcaagcga ataagtaaaa cgattgcagt 280
54 <210> SEQ ID NO: 2
55 <211> LENGTH: 67
56 <212> TYPE: PRT
57 <213> ORGANISM: Conus arentus
59 <400> SEQUENCE: 2
61 Met Met Ser Lys Leu Gly Val Phe Leu Thr Ile Cys Met Leu Leu Phe
62 1 5 10 15
64 Pro Leu Thr Ala Leu Pro Leu Asp Gly Asp Gln Pro Ala Asp Arg Pro
65 20 25 30
67 Ala Glu Arg Met Gln Asp Asp Phe Ile Thr Glu His His Pro Leu Phe

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68 35 40 45
70 Asp Pro Val Lys Arg Cys Cys Glu Arg Pro Cys Asn Ile Gly Cys Val
71 50 55 60
73 Pro Cys Cys
74 65
76 <210> SEQ ID NO: 3
77 <211> LENGTH: 14
78 <212> TYPE: PRT
79 <213> ORGANISM: Conus arentus
81 <220> FEATURE:
82 <221> NAME/KEY: PEPTIDE
83 <222> LOCATION: (1)..(14)
84 <223> OTHER INFORMATION: Xaa at residue 3 is Glu or gamma-carboxy Glu; Xaa at residue
5 an
85 d 12 is Pro or (Hy)? what is this?
88 <400> SEQUENCE: 3
W--> 90 Cys Cys Xaa Arg Xaa Cys Asn Ile Gly Cys Val Xaa Cys Cys
91 1 5 10
93 <210> SEQ ID NO: 4
94 <211> LENGTH: 244
95 <212> TYPE: DNA
96 <213> ORGANISM: Conus atlanticus
98 <400> SEQUENCE: 4
99 ggatccatga tgtctaaact gggagtccttg ttgaccatct gtctgcttct gtttccactt 60
101 actgctcttc cgctggatga agatcaaccg gtacaccgac ctgcagagcg tatgcaggac 120
103 atttcatctg atcaacatct cttctttgat ctcacaaac ggtgctgca gttgccatgc 180
105 gggccaggct tttgcgtccc ttgttgctga catcaataac gtgttgatga ccaactttct 240
107 cgag 244
110 <210> SEQ ID NO: 5
111 <211> LENGTH: 69
112 <212> TYPE: PRT
113 <213> ORGANISM: Conus atlanticus
115 <400> SEQUENCE: 5
117 Gly Ser Met Met Ser Lys Leu Gly Val Leu Leu Thr Ile Cys Leu Leu
118 1 5 10 15
120 Leu Phe Pro Leu Thr Ala Leu Pro Leu Asp Glu Asp Gln Pro Val His
121 20 25 30
123 Arg Pro Ala Glu Arg Met Gln Asp Ile Ser Ser Asp Gln His Leu Phe
124 35 40 45
126 Phe Asp Leu Ile Lys Arg Cys Cys Glu Leu Pro Cys Gly Pro Gly Phe
127 50 55 60
129 Cys Val Pro Cys Cys
130 65
132 <210> SEQ ID NO: 6
133 <211> LENGTH: 15
134 <212> TYPE: PRT
135 <213> ORGANISM: Conus atlanticus
137 <220> FEATURE:
138 <221> NAME/KEY: PEPTIDE
139 <222> LOCATION: (1)..(15)

RAW SEQUENCE LISTING

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140 <223> OTHER INFORMATION: Xaa at residue 3 is Glu or gamma-carboxy Glu; Xaa at residue 5, 8

141 and 13 is Pro or Hy?

144 <400> SEQUENCE: 6

W--> 146 Cys Cys Xaa Leu Xaa Cys Gly Xaa Gly Phe Cys Val Xaa Cys Cys

147 1 - 5 10 15

149 <210> SEQ ID NO: 7

150 <211> LENGTH: 310

151 <212> TYPE: DNA

152 <213> ORGANISM: Conus aurisiacus

154 <400> SEQUENCE: 7

155 caagagggat cgatagcagt tcatgatgtc taaactggga gtcttgttga ccatctgttt 60

157 gcttctgttt ccccttactg ctcttccgat ggatggagat caatctgtag accgacctga 120

159 agagcgtatg caggacgaca ttcatctga gcagcatccc ttgtttaatc agaaaagaat 180

161 gtgttgccgc gaaggccgga aatgccccag ctatttcaga aacagtcaga ttgtcattg 240

163 ttgttaaagt acaacgtgtc gatgaccaac ttcgttatca cgactaatga ataagtaaaa 300

165 cgattgcagt 310

168 <210> SEQ ID NO: 8

169 <211> LENGTH: 74

170 <212> TYPE: PRT

171 <213> ORGANISM: Conus aurisiacus

173 <400> SEQUENCE: 8

175 Met Met Ser Lys Leu Gly Val Leu Leu Thr Ile Cys Leu Leu Leu Phe

176 1 5 10 15

178 Pro Leu Thr Ala Leu Pro Met Asp Gly Asp Gln Ser Val Asp Arg Pro

179 20 25 30

181 Glu Glu Arg Met Gln Asp Asp Ile Ser Ser Glu Gln His Pro Leu Phe

182 35 40 45

184 Asn Gln Lys Arg Met Cys Cys Gly Glu Gly Arg Lys Cys Pro Ser Tyr

185 50 55 60

187 Phe Arg Asn Ser Gln Ile Cys His Cys Cys

188 65 70

190 <210> SEQ ID NO: 9

191 <211> LENGTH: 22

192 <212> TYPE: PRT

193 <213> ORGANISM: Conus aurisiacus

195 <220> FEATURE:

196 <221> NAME/KEY: PEPTIDE

197 <222> LOCATION: (1)..(22)

198 <223> OTHER INFORMATION: Xaa at residue 5 is Glu or gamma-carboxy Glu; Xaa at residue 10 i

199 s Pro or Hyp; Xaa at residue 12 is Tyr, 125I-Tyr, mono-iodo-Tyr,

200 di-iodo-Tyr, O-sulpho-Tyr or O-phospho Ty Tyr

203 <400> SEQUENCE: 9

W--> 205 Met Cys Cys Gly Xaa Gly Arg Lys Cys Xaa Ser Xaa Phe Arg Asn Ser

206 1 5 10 15

208 Gln Ile Cys His Cys Cys

209 20

211 <210> SEQ ID NO: 10

212 <211> LENGTH: 257

213 <212> TYPE: DNA

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```

214 <213> ORGANISM: Conus aurisiacus
216 <400> SEQUENCE: 10
217 ggatccatga tgtctaaact gggagtcttg ttgaccatct gtttgcttct gtttcccctt      60
219 actgctcttc cgatcgatgg agatcaatct gtagaccgac ctgcagagcg tatgcaggat      120
221 gacatttcat ctgagcagca tcgcttggtc aatcagaaaa gaagggtgctg cgggtggcca      180
223 tgcccccgac aaatcgacgg tgaatattgt ggctgttgcc ttggatgata accgtgttga      240
225 tgaccaactt tctcgag
228 <210> SEQ ID NO: 11
229 <211> LENGTH: 75
230 <212> TYPE: PRT
231 <213> ORGANISM: Conus aurisiacus
233 <400> SEQUENCE: 11
235 Gly Ser Met Met Ser Lys Leu Gly Val Leu Leu Thr Ile Cys Leu Leu
236 1          5          10          15
238 Leu Phe Pro Leu Thr Ala Leu Pro Ile Asp Gly Asp Gln Ser Val Asp
239          20          25          30
241 Arg Pro Ala Glu Arg Met Gln Asp Asp Ile Ser Ser Glu Gln His Arg
242          35          40          45
244 Leu Phe Asn Gln Lys Arg Arg Cys Cys Arg Trp Pro Cys Pro Arg Gln
245          50          55          60
247 Ile Asp Gly Glu Tyr Cys Gly Cys Cys Leu Gly
248 65          70          75
250 <210> SEQ ID NO: 12
251 <211> LENGTH: 19
252 <212> TYPE: PRT
253 <213> ORGANISM: Conus aurisiacus
255 <220> FEATURE:
256 <221> NAME/KEY: PEPTIDE
257 <222> LOCATION: (1)..(19)
258 <223> OTHER INFORMATION: Xaa at residue 13 is Glu or gamma-carboxy Glu; Xaa at
residue 3a → Arg is at location 3, insert a space
259 nd 7 is Pro or Hyp; Xaa at residue 4 is Trp or Bromo Trp; Xaa at
260 residue 14 is Tyr, 125I-Tyr, mono-iodo-Tyr, di-iodo-Tyr, O-sulpho
261 -Tyr or O-phospho-Ty Tyr?
264 <400> SEQUENCE: 12
W--> 266 Cys Cys Arg Xaa Xaa Cys Xaa Arg Gln Ile Asp Gly Xaa Xaa Cys Gly
267 1          5          10          15
269 Cys Cys Leu
272 <210> SEQ ID NO: 13
273 <211> LENGTH: 262
274 <212> TYPE: DNA
275 <213> ORGANISM: Conus aurisiacus
277 <400> SEQUENCE: 13
278 ggatccatga tgtctaaact gggagtcttg ttgaccatct gtctacttct gtttcccctt      60
280 actgcttttc cgatggatgg agatcaacct gcagaccaac ctgcagatcg tatgcaggac      120
282 gacatttcat ctgagcagta tcccttggtt gataagagac aaaagtgttg cactgggaag      180
284 aaggggtcat gctccggcaa agcatgcaaa aatctcaaat gttgctctgg acgataacgt      240
286 gttgatgacc aactttctcg ag
289 <210> SEQ ID NO: 14
290 <211> LENGTH: 78

```

This Xaa is not explained

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Input Set : A:\2314-242.ST25.txt
Output Set: N:\CRF3\08012001\I910009.raw

291 <212> TYPE: PRT
292 <213> ORGANISM: Conus aurisiacus
294 <400> SEQUENCE: 14
296 Gly Ser Met Met Ser Lys Leu Gly Val Leu Leu Thr Ile Cys Leu Leu
297 1 5 10 15
299 Leu Phe Pro Leu Thr Ala Phe Pro Met Asp Gly Asp Gln Pro Ala Asp
300 20 25 30
302 Gln Pro Ala Asp Arg Met Gln Asp Asp Ile Ser Ser Glu Gln Tyr Pro
303 35 40 45
305 Leu Phe Asp Lys Arg Gln Lys Cys Cys Thr Gly Lys Lys Gly Ser Cys
306 50 55 60
308 Ser Gly Lys Ala Cys Lys Asn Leu Lys Cys Cys Ser Gly Arg
309 65 70 75
311 <210> SEQ ID NO: 15
312 <211> LENGTH: 23
313 <212> TYPE: PRT
314 <213> ORGANISM: Conus aurisiacus
316 <220> FEATURE:
317 <221> NAME/KEY: PEPTIDE
318 <222> LOCATION: (1)..(23)
319 <223> OTHER INFORMATION: Xaa at residue 1 is Gln or pyro-Glu
322 <400> SEQUENCE: 15
324 Xaa Lys Cys Cys Thr Gly Lys Lys Gly Ser Cys Ser Gly Lys Ala Cys
325 1 5 10 15
327 Lys Asn Leu Lys Cys Cys Ser
328 20
330 <210> SEQ ID NO: 16
331 <211> LENGTH: 232
332 <212> TYPE: DNA
333 <213> ORGANISM: Conus aurisiacus
335 <400> SEQUENCE: 16
336 ggatccatga tgtctaaact gggagtcttg ctgaccatct gtctgcttct gtttccaactt 60
338 actgctgttc cgctggatgg agatcaacct ctagaccgac acgcggagcg tatgcatgat 120
340 ggcatttcac ctaaagccca tccctggttt gatcccgta aacgggtgtg caaggtgcaa 180
342 tgcgagtctt gcaccccttg ttgctaactg gttgatgacc aactttctcg ag 232
345 <210> SEQ ID NO: 17
346 <211> LENGTH: 68
347 <212> TYPE: PRT
348 <213> ORGANISM: Conus aurisiacus
350 <400> SEQUENCE: 17
352 Gly Ser Met Met Ser Lys Leu Gly Val Leu Leu Thr Ile Cys Leu Leu
353 1 5 10 15
355 Leu Phe Pro Leu Thr Ala Val Pro Leu Asp Gly Asp Gln Pro Leu Asp
356 20 25 30
358 Arg His Ala Glu Arg Met His Asp Gly Ile Ser Pro Lys Arg His Pro
359 35 40 45
361 Trp Phe Asp Pro Val Lys Arg Cys Cys Lys Val Gln Cys Glu Ser Cys
362 50 55 60
364 Thr Pro Cys Cys

Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/910,009

DATE: 08/01/2001

TIME: 15:38:11

Input Set : A:\2314-242.ST25.txt

Output Set: N:\CRF3\08012001\I910009.raw

L:21 M:270 C: Current Application Number differs, Replaced Current Application No
L:21 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:609 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:667 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:727 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:788 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
L:851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:914 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:974 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:1037 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:1093 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54
L:1152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57
L:1212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:1215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60
L:1274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63
L:1277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63
L:1332 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:1390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69
L:1447 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72
L:1506 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75
L:1567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78
L:1626 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81
L:1685 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84
L:1741 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87
L:1800 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90
L:1859 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
L:1915 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
L:1990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99
L:1993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99
L:2068 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
L:2071 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
L:2087 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
L:2090 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
L:2150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:2209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109
L:2212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109
L:2274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112

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Output Set: N:\CRF3\08012001\I910009.raw

L:2332 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115
L:2389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118
L:2392 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118
L:2451 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121